Operating Instructions

STEREO DOUBLE CASSETTE DECK RECEIVER
RX-731(S) / RX-730(S) / RX-1320(S)
STEREO TURNTABLE
PL-203AZ / PL-223AZ / PL-223Z

The model PL-223Z is not sold in the U.S.A.
The models PL-203AZ and PL-223AZ are not sold in Canada.

Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT NOTICE

[For U.S. and Canadian models]

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security.

[For Canadian models]

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED)PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

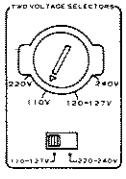
TWO VOLTAGE SELECTOR SWITCHES

Only multi-voltage models are provided with these switches.
U. S. and Canadian models are not provided with these switches.
Mains voltages in Saudi Arabia are 127V and 220V only.
Never use this model with 110V setting in Saudi Arabia.

The line voltage selector switches are on the rear panel. Before your model is shipped from the factory, these switches are set to the power requirements of the destination. Check they are to properly before plugging the power cord into the household wall socket. If the voltage is not properly set or if you move to an area where the voltage requirements differ, adjust the selector switches as follows.

1. Use a medium-size screwdriver.
2. First, insert a screwdriver into the groove of the voltage selector at the top, and adjust so that tip of the groove points to the voltage value of your area.
3. Next, insert the screwdriver into the groove of the voltage selector at the bottom and adjust until the voltage is the same as at the top.

Both switches must be in the same switch setting.



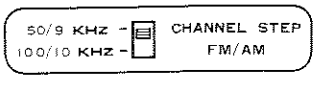
CHANNEL STEP SWITCH

Only multi-voltage models are provided with this switch.
U. S. and Canadian models are not provided with this switch. (This switch is on the rear panel.)
The unit has been factory preset to the channel allocation for the area in which it is to be sold, If the value is set incorrectly, frequency display may stop at the wrong frequency, or sound may be distorted, resulting in an inability to reproduce reception signals at their proper sound quality.
For this reason, be sure to confirm that the value is set correctry before first using the unit.

[100 kHz/10 kHz] position:
Set to this position for areas with FM reception step of 100 kHz, AM 10 kHz.

[50 kHz/9 kHz] position:
Set to this position for areas with FM reception step of 50 kHz, AM 9 kHz.

When unsure about the channel allocation for your area, consult your dealer for correct information.



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The future of sound and vision.

IMPORTANT

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

SAFETY INSTRUCTIONS

READ INSTRUCTIONS — All the safety and operating instructions should be read before the appliance is operated.

RETAIN INSTRUCTIONS — The operating instrucions should be retained for future reference.

HEED WARNING — All warnings on the appliance and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS — All operating and use instructions should be followed.

WATER AND MOISTURE — The appliance should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

LOCATION — The appliance should be installed in a stable location.

WALL OR CEILING MOUNTING — The appliance should not be mounted to a wall or ceiling.

VENTILATION — The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

HEAT — The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

POWER SOURCES — The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

POWER-CORD PROTECTION — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

POLARIZATION — If your purchased product is provided with a polarized power plug, please read the following instructions. This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

CLEANING — The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.

POWER LINES — An outdoor antenna should be located away from power lines.

NONUSE PERIODS — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

OBJECT AND LIQUID ENTRY — Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

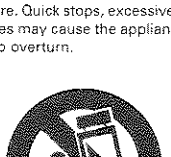
DAMAGE REQUIRING SERVICE — The appliance should be serviced by a Pioneer authorized service center or qualified service personnel when:

- The power-supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped; or the enclosure damaged.

SERVICING — The user should not attempt to service the appliance beyond that described in the operating instructions. For all other servicing, contact the nearest Pioneer authorized service center.

OUTDOOR ANTENNA GROUNDING — If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.
In the U.S.A. section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. A.

CART — An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



NEC — NATIONAL ELECTRIC CODE

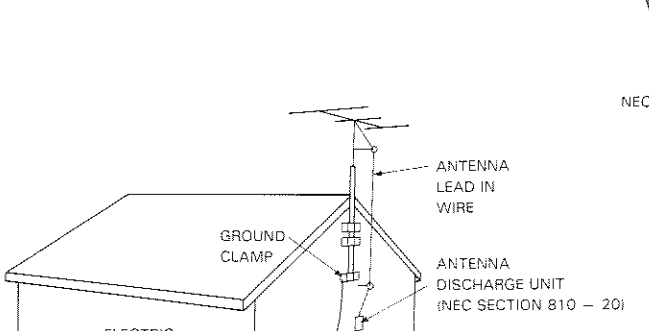


FIG.A

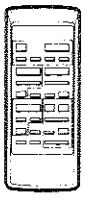
CONDENSATION

When the unit is brought into a warm room from previously cold conditions or when the room temperature is suddenly increased, condensation may from inside and the unit may not be able to attain its performance. In cases like this, allow the unit to stand for about an hour or raise the room temperature gradually.

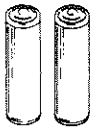
POWER-CORD CAUTION

Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc., on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement.

CHECKING ACCESSORY ITEMS



• Remote Control Unit



• Size "AAA" (IEC R03) 1.5V (UM-4) dry cell batteries

• AM Loop Antenna

• FM T-type Antenna

NOTE:
The remote control unit is different among RX-731S, RX-730S and RX-1320S. For details, refer to the separate remote control unit operating instructions.

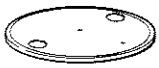
BEFORE OPERATION

[TURNTABLE PL-203AZ/PL-223AZ/PL-223Z] INITIAL TURNTABLE SET-UP

1. Check the parts.

EP adaptor
(You will find this taped on the cabinet)

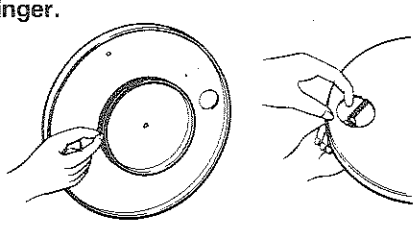
Platter mat



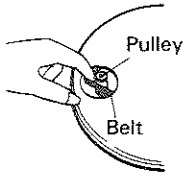
Platter

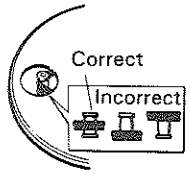
2. Pull dust cover up and off of rear hinges. (PL-223Z)

3. Pinch the belt on inner rim between thumb and forefinger.



4. Slip the belt over thumb and pull out, inserting thumb in hole.
5. Insert forefinger from top of the platter and transfer the belt to forefinger.
6. Lower the platter onto the spindle.
7. Release belt onto pulley.





8. Place the platter mat on the platter. (with "PIONEER" side up)
9. Remove the vinyl band holding the tonearm.
10. Remove the tonearm from the arm rest.

11. Remove the stylus cover.

ANTENNA CONNECTIONS

RADIO RECEPTION IS NOT POSSIBLE UNLESS THE ANTENNA IS PROPERLY CONNECTED.

The strength of broadcast signal varies from one area to another (signal propagation is especially poor in metropolitan areas where there are many tall buildings, and in mountainous areas.)
Proper antenna installation is vital to good reception.

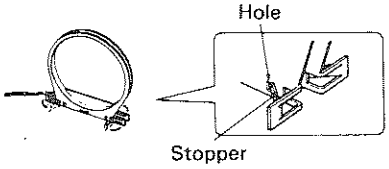
AM ANTENNA

The AM Loop Antenna supplied with the cassette deck receiver should be connected to the AM antenna terminals. The antenna should be placed at a distance from the cassette deck receiver, and should not be allowed to touch metallic objects. Avoid placing it near CD players, personal computers,television sets, and other devices generating radio frequencies.

Setting up the AM antenna

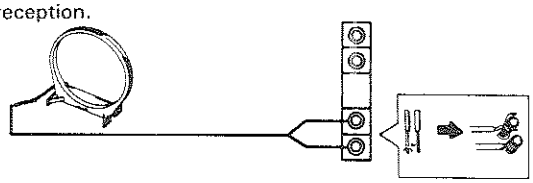
- Fold out the supports on the bottom of the antenna. Insert the stopper in the hole in the antenna to lock them in place.
- Place the antenna on a level surface and rotate it to locate the orientation that yields the best reception.

AM Loop Antenna Set-up



AM Loop Antenna Connection

The accessory AM Loop Antenna must be connected to ensure proper reception.



External AM antenna

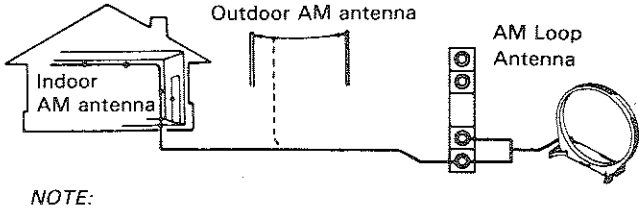
Indoor AM antenna

Provide a vinyl-coated wire (5 to 6 meters (17 to 20 feet) long). Secure one end to the AM terminal and the other end to a wall or other high location.

Outdoor AM antenna

If reception is still poor even if a lead antenna is stretched out indoors, stretch out a vinyl-coated wire and secure it outdoors.

Connecting the external AM antenna



NOTE:
Do not detach the AM Loop Antenna when using the external AM antenna.

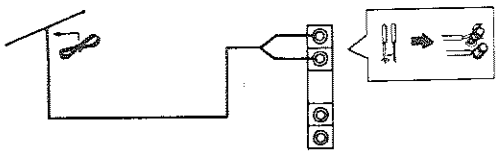
FM ANTENNA

FM T-type antenna attachment

Connect the accessory FM T-type antenna to the FM terminals. Stretch the antenna out to its full length, and affix it to a wall, etc.
Stretch out both ends.

Correct Wrong Wrong

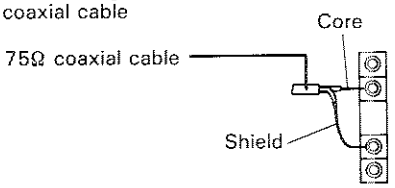
The accessory FM T-type antenna must be connect to ensure proper reception.



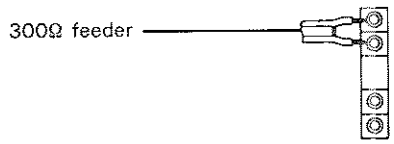
External FM antenna installation

Use an external antenna when the signals from the station are weak and cannot be picked up by the accessory FM T-type antenna, or when the sound is accompanied by large amounts of noise. There are two ways of connecting the external FM antenna to the ANTENNA terminals with 300Ω feeder wire, or with a 75Ω coaxial cable.
It is recommended that you use the 75Ω coaxial cable, so that the effects of extraneous noise are reduced to a minimum.

When the connecting cable is a 75Ω coaxial cable



When the connecting cable is a 300Ω feeder wire



CONNECTIONS

* Plug the power cord into the household electrical outlets only after all the connections have been completed

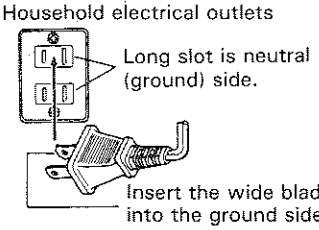
Proceed as follows with the set-up and connections

1. Connect the FM antenna and the AM antenna to the cassette tape deck receiver's ANTENNA terminals. (See page 3~4)
   (Use an antenna ground as necessary.)
2. Connect the turntable's cords to the cassette tape deck receiver's TURNTABLE jacks. If any other stereo component is used, connect in the same way to the cassette tape deck receiver's input (and output) jacks.
3. Connect the speaker cords to the SPEAKERS terminals.
4. Finally, connect the power cord to the AC wall socket.

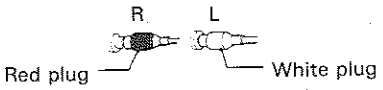
CONNECTING THE POWER CORD (For U.S. and Canadian models)

Household electrical outlets are provided with specific polarity, a live side and a neutral (ground) side. This unit utilizes such polarity in order to improve sound quality. As shown in the illustration, be sure to insert the power plug so that its blades match the width of slots in the outlet.

Household electrical outlets



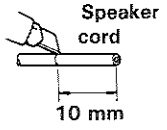
Connecting the input/output cords



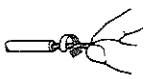
- Connect the plugs properly. Faulty connections can cause noise and also breakdowns and failures.
- The white terminal is for the left channel and the red terminal is for the right channel.

Connecting the speaker cords.

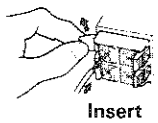
1. **Cutter**



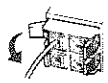
2. **Twist the strands.**



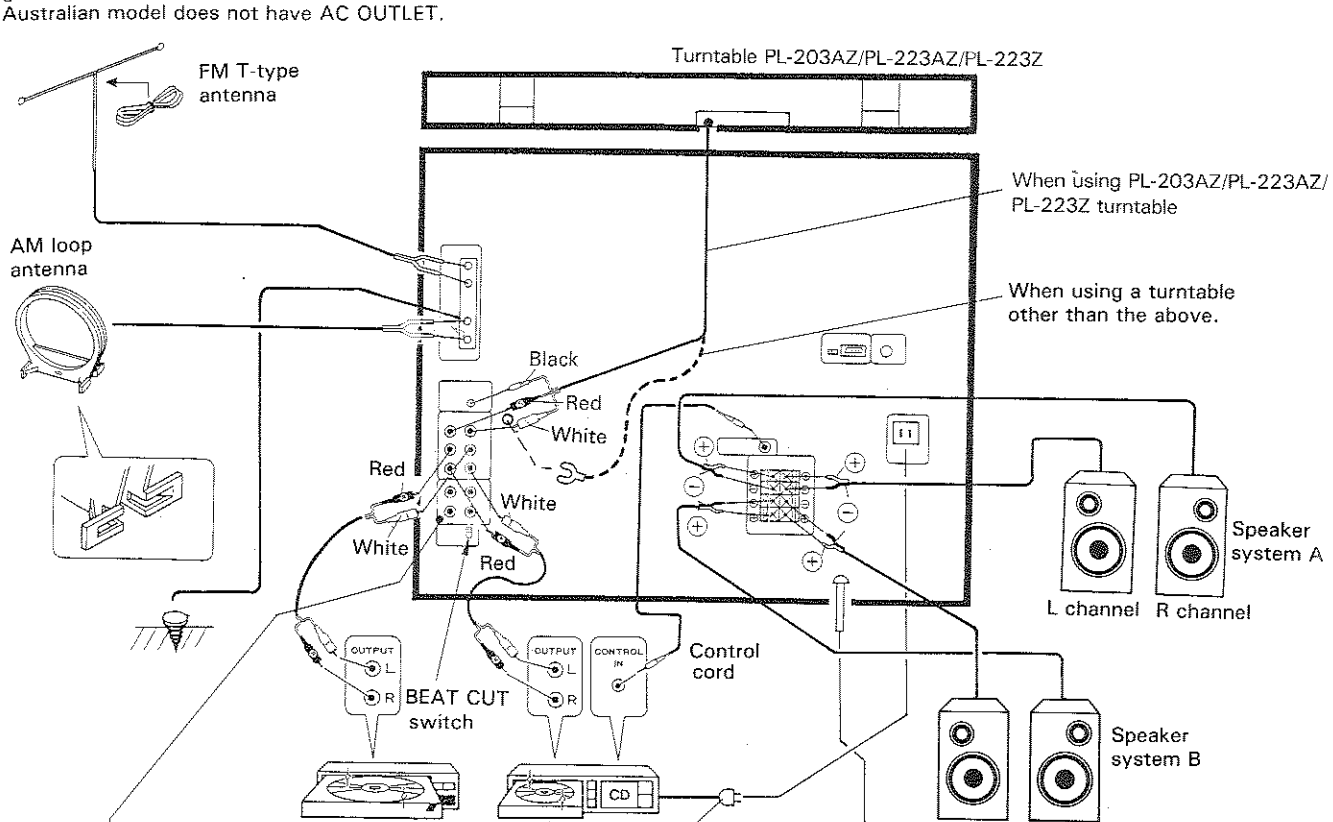
3. **Push the lever toward the outside**

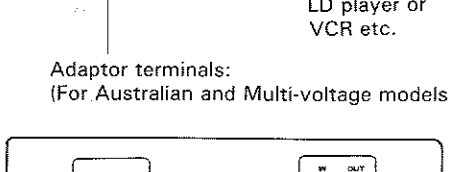


4. **Pull the lever toward the inside**



The U.S. and Canadian models do not have the adaptor and ground terminals.
Australian model does not have AC OUTLET.





Adaptor component
(Dynamic expander, etc.)

NOTE:
Do not remote the shorting bar when not connecting the adaptor terminals. When the adaptor component is disconnect, reinsert the shorting bar.

Antenna ground

Although grounding is not necessary for reception, it is recommended for protection against damage from lightning for an outdoor FM antenna. Grounding is recommended as well to help to reduce noise and hum.
NOTE:
Never make the ground connection to a gas pipe as sparks could cause the gas to ignite.

NOTE ABOUT SPEAKER CONNECTIONS

- Speaker systems should have an impedance from 8Ω to 16Ω.
- Be sure that connections are secure. Check to make sure that wires do not protrude from their terminals.
- Do not allow the speaker cords to become shorted. Otherwise damage may result to your equipment.
- Do not attempt to simultaneously connect two sets of speakers to a single side (A or B). When using two sets of speakers, connect one set to side A and one set to side B.

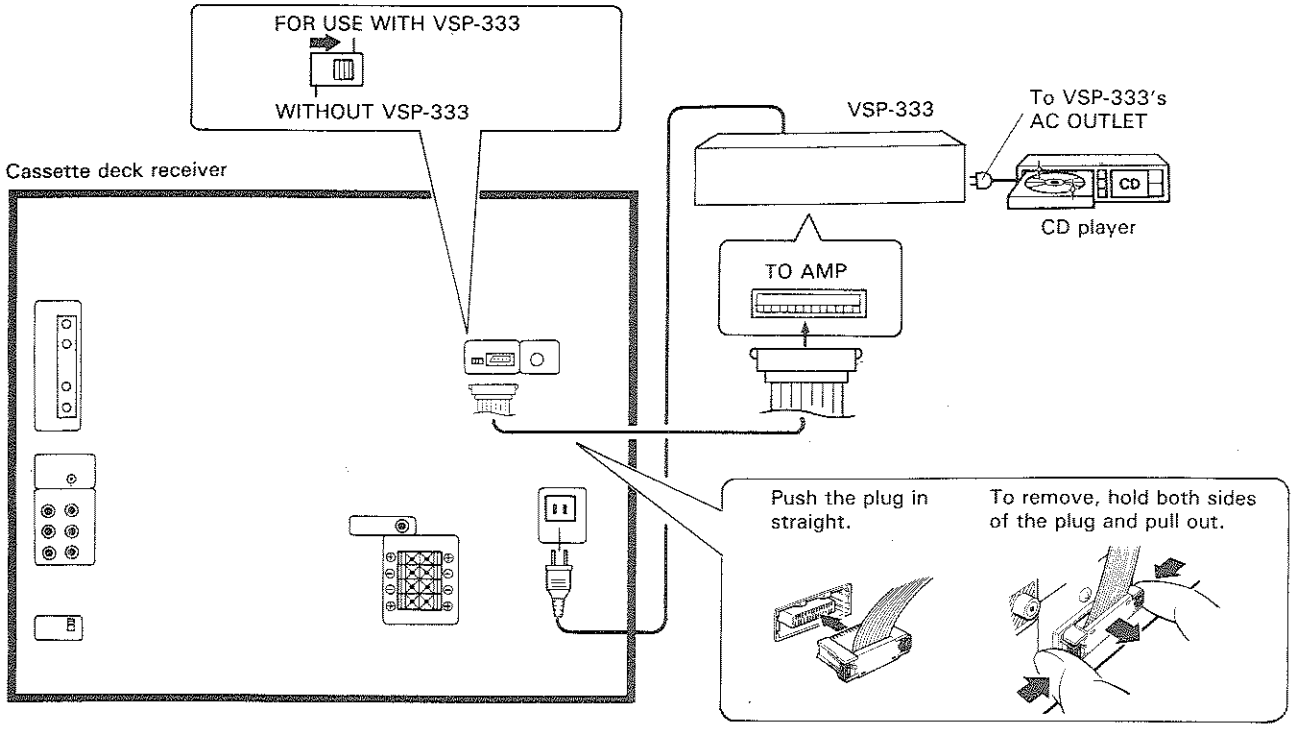
BEAT CUT switch
Set this switch to minimize beat when beat is being recorded during recordings of AM broadcasts or during tape copying while an AM broadcast is being received.

AC OUTLET SWITCHED 200W MAX

(U.S., Canadian and Multi-voltage models)
Power supplied through this outlet is turned on and off by this equipment's POWER switch. Total electrical power consumption of connected equipment should not exceed 200 W.
NOTE:
Do not connect appliances with high power consumption such as heaters, irons, or television sets to the AC OUTLET, in order to avoid overheating or fire risk.
This can cause this equipment to malfunction.

Connecting the AV surround processing amplifier VSP-333

Systems which include the VSP-333 comprise U.S., Canadian and multi-voltage models only. (The VSP-333 is not for sale in other regions).

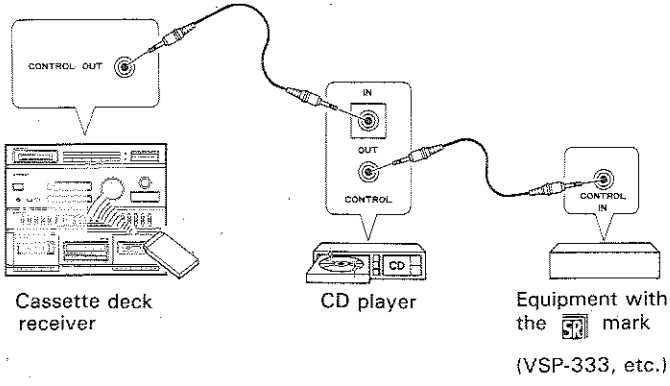


- When connecting VSP-333, turn the power OFF of the unit and disconnect the power cord from the household electrical outlets.
- Connect the power cord of VSP-333 to the AC OUTLET of the unit. With a system where a CD player is installed, connect the power cord of the CD player to the AC OUTLET of VSP-333.
- Make sure to set the selecting switch before turning the power ON. Do not switch it during operation of the unit.

To control a unit other than this receiver using the remote control unit.

① In the case of a PIONEER equipment marked SR which is provided with a remote sensor, operate the equipment by aiming the remote control unit at the remote sensor on the equipment.

② For equipment with the SR mark, but without a remote sensor, operation of the equipment by facing the remote control unit towards the remote sensor of the cassette deck receiver possible with connection from the CONTROL OUT jack to the CONTROL IN jack. Use a commercially available cable with mini-plugs for the connection.



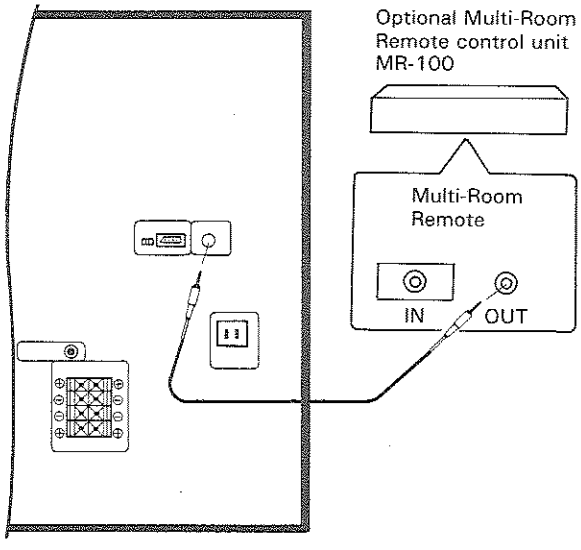
CONNECTING THE MULTI-ROOM REMOTE IN TERMINAL

To the optional Multi-Room Remote control unit MR-100

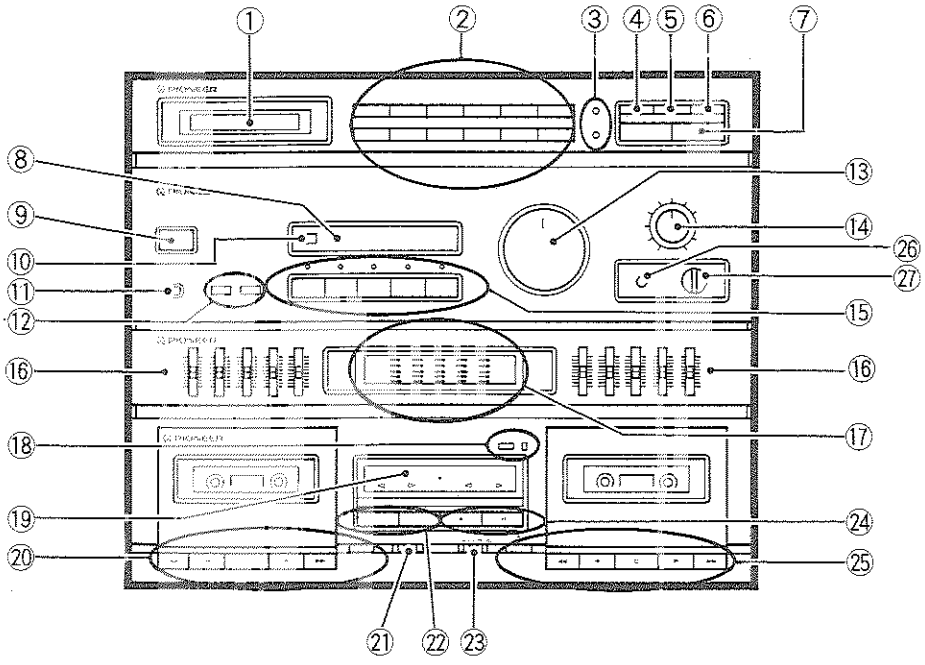
- For details, see instruction manual for Multi-Room Remote control unit.

NOTE:

Be careful not to make the wrong connections for CONTROL OUT (black) and MULTI-ROOM REMOTE IN (green).

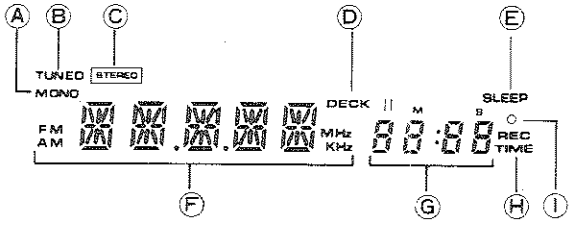


PANEL FACILITIES



TUNER SECTION

① Display section



Ⓐ MONO indicator
Lights when the FM MONO switch is set to ON. When this indicator is lit, FM stereo broadcasts are reproduced monaurally.

Ⓑ TUNED indicator
Lights when a broadcast is received and turned in well.

Ⓒ STEREO indicator
Lights when an FM stereo broadcast is received (FM MONO switch is set to OFF).

Ⓓ DECK II indicator
Lights when deck II is recording.

Ⓔ SLEEP indicator
Indicates that the sleep timer is activated.

Ⓕ Frequency display
Shows received broadcast frequency. Also gives scrolling display of main function status.
FM and MHz light: FM reception.
AM and kHz light: AM reception.
Messages will be displayed when setting time and when turning the power ON/OFF.

Ⓖ Time display
This shows the present time and during recording on deck II, it shows the elapsed recording time.

Ⓗ DECK II REC TIME indicator
Lights when deck II is recording.

Ⓘ Remote control indicator
Flashes when a command is being received from the remote control unit.

② STATION CALL switches
These are used to recall preset broadcasting stations and to preset the station.

③ Time switches
Used for starting the clock adjustment.

④ FM MONO switch
Normally, the MONO indicator remains off. However, it may not be possible to tune in a desired FM station because it is too far away or because its signals are too weak. In cases like these, press the switch to set the reception to the monaural mode (MONO indicator lights) and tune in the station. The program of an FM stereo broadcast will be heard in mono. This switch will not function for AM reception. The FM MONO setting is memorized along with station frequency when presetting a station.

⑤ MEMORY switch
This switch is used to memorize stations. When the switch is pressed, the frequency display will flash. To memorize the frequency of any station, press one of the STATION CALL switch while the frequency indicator is flashing.

⑥ BAND selector switch (FM/ AM)
This is used to select the band of the desired station. The bands change alternately each time the switch is pressed.

FM reception
AM reception

⑦ −, + switches
[During tuning]
These are used for locating stations.
Used "−" switch for lower, and "+" switch for higher frequencies.
[During time setting]
Used for adjusting the clock.

AMPLIFIER SECTION

⑧ MULTI-ROOM REMOTE indicator

Blinks when receiving signals from the Multi-room remote control unit.

⑨ POWER STANDBY/ON switch

ON: When set to the ON position, power is supplied and the unit becomes operational.

STANDBY: When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.
(The tuner section display shows only the time.)

Disconnect the power cord from the power outlet when you do not plan to use the cassette tape deck receiver for a long period of time.

The cassette tape deck receiver has a backup function, so it will return to the original status when the power cord is unplugged and soon again plugged into the power outlet.

⑩ REMOTE SENSOR window

⑪ PHONES jack

This is a "standard plug-type jack" for headphones.

⑫ SPEAKERS A/B switches ON ▬ /OFF ■

[ON]: Depressed position: Sound is heard from the speaker systems.

[OFF] Released position: No sound is heard from the speaker systems.

NOTE:
When the speaker system is connected to only one speaker terminal (A or B) and both A and B selector switches are ON, there will be no sound.
Turn ON only the selector to which the speaker system is connected.

⑬ VOLUME control/indicator

The volume is increased when this control is turned clockwise, decreased when turned counterclockwise. When operating with the remote control unit, the control automatically turns clockwise when "+" is pressed, counterclockwise when "-" is pressed.

⑭ BALANCE control

Usually set this control to the central position. If turned counterclockwise, the volume of the right channel will decrease. If turned clockwise, the volume of the left channel will decrease.

⑮ FUNCTION switches/indicators

The indicators light for the specified functions. See page 11 for details.

GRAPHIC EQUALIZER SECTION

See page 11 for details.

⑯ GRAPHIC EQUALIZER controls

⑰ SPECTRUM ANALYZER display

CASSETTE DECK SECTION

- The cassette deck receiver is provided with an automatic tape selector function.
  Deck I . . . . . NORMAL/CrO_2/METAL
  Deck II . . . . . NORMAL/CrO_2

⑱ DECK II COUNTER and reset switch

3-digit display measures tape travel on deck II.

⑲ Indicators

Direction (◁, ▷): Show direction of tape travel.
Blinks during DECK II PAUSE mode.

REC (or ○): Lights when recording. Flashes when copying a tape.
Slow flashing = Normal copy
Rapid flashing = High speed copy

⑳ Deck I Operation switches

▲ EJECT ····· Ejection

►(PLAY: FWD) ··· For playing back a tape in the forward mode. The FUNCTION selector swithces to TAPE. (AUTO FUNCTION)

◄(PLAY: REV) ··· For playing back a tape in the reverse mode. The FUNCTION selector swithces to TAPE. (AUTO FUNCTION)

■(STOP) ····· For stopping the tape.

►►(FAST) ····· Fast forward in forward mode, rewind in reverse mode.

◄◄(FAST) ····· Rewind in forward mode, fast forward in reverse mode.

㉑ DOLBY* NR switch

Set to activate noise reduction system. Use to play back tapes recorded using Dolby B NR.

- Tapes recorded using Dolby B NR should always be played back with the noise reduction system on. Sound quality will be adversely affected if they are played back with the system off, or if tapes recorded using a different noise reduction system are played back with the Dolby B NR system on.
- It is recommended that tapes recorded using Dolby B NR be so marked on the label. This will help to prevent incorrect setting of the noise reduction switch during playback.

*

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double-D symbol ⧉ are trademarks of Dolby Laboratories Licensing Corporation.

㉒ COPY MODE switches

These switches are used to select the copy mode.

HIGH . . . . . High speed copying (double-speed, halftime copying)

NORMAL . . . . . Normal speed copying

㉓ REV (REVERSE) MODE switch

Switch position		During playback	During recording
RELAY PLAY	REC	Plays both tape sides. When one deck finishes playback, the other deck begins playback of both tape sides for 6 times. If there is a tape in only one deck, then that deck continuously plays both sides of the tape for 6 times.	Records on one side (Deck II only).
REC	PLAY	Plays both tape sides for 6 times.	Records on side (Deck II only).

㉔ DECK II switches

REC (●) ····· To set to recording standby mode. Recording begins when you press the PLAY switch (◄ or ►).

PAUSE (▮▮) ····· Temporarily stops tape travel. Cancels pause mode when pressed again or press the PLAY switch.

㉕ DECK II Operation switches:

Same as Deck I operation switches ⑲.

㉖ MIC jack (Multi-voltage model only)

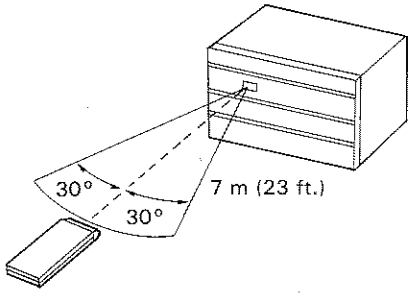
㉗ MIC MIXING level control (Multi-voltage model only)

See page 15.

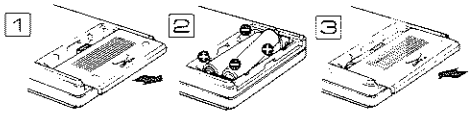
REMOTE CONTROL UNIT FACILITIES

Range of remote control

When the remote control unit is pointed at the REMOTE SENSOR window on the deck receiver and any of its keys is pressed, the cassette deck receiver and other components can be operated by remote control.
Distance: Within a range of about 7 meters from the REMOTE SENSOR window.
Angle: Within approx. 30 degrees from the center of the REMOTE SENSOR window.
Remote control will not be possible if there is an obstacle between the remote control unit and the REMOTE SENSOR window.
Performance of the remote control unit is adversely affected in the presence of strong fluorescent light. Keep such lights away, specially from the sensor window.



PUTTING BATTERIES INTO THE REMOTE CONTROL UNIT



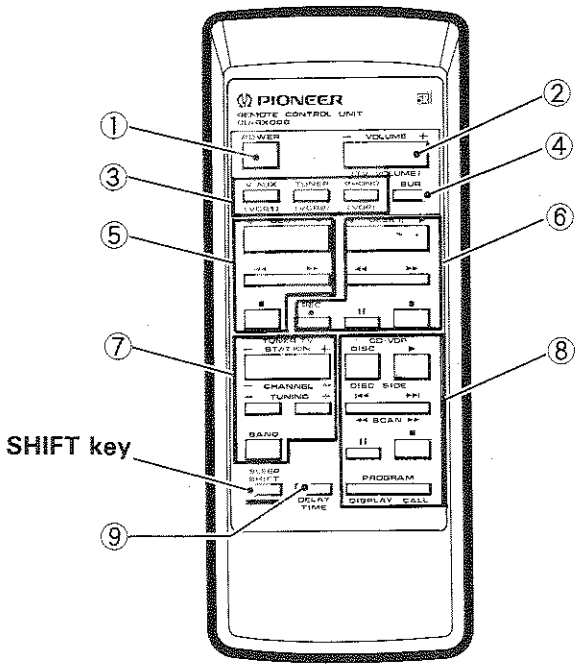
[1] Remove the cover of the battery compartment on the rear side of the remote control unit.
[2] Take out the two size "AAA" [IEC R03 (UM-4)] dry cell batteries supplied and load them into the battery compartment, correctly matching the plus ⊕ and minus ⊖ as indicated inside the compartment.
[3] Replace the cover of the battery compartment.

Cautions for handling dry cell batteries.

Misusing dry cell batteries can result in electrolyte leakage or explosions, Bear in mind the following points for getting the most out of your batteries.

- When loading the batteries into the battery compartment, make sure the plus ⊕ and minus ⊖ polarities correspond to the markings on the compartment.
- Even though they may be the same shape, batteries come with different voltage ratings. Do not use different types of batteries together. Use only the same kind of batteries.
- Do not mix up new batteries and used batteries but replace all the batteries at the same time.

NOTE:
RX-730S, RX-1320S, RX-731S are provided with Programmable Remote Control Unit.
For operation of the Programmable Remote Control Unit refer to the seperate Operating Instructions.



① POWER key

② VOLUME key: - (down), + (up)

Increases/decreases the sound volume of the unit.
[When used with the SHIFT key]
Increases/decreases the sound volume of TV set.

③ FUNCTION selector keys

For selecting V/AUX (VIDEO/AUX), TUNER or PHONO.
[When used with the SHIFT key]
Can be used to select VCR1, VCR2 or VDP functions.
NOTE:
This function can be used with Pioneer products with [SR] mark which are provided with the input selector for VCR1, VCR2 and VDP, with a system where the optional AV surround processor VSP-333 is installed, its video input selector can be used.
Precautions on using the system in combination with VSP-333.

- When selecting V/AUX, the mode of the input selector of VSP-333 does not change to AUDIO. Set to AUDIO by using the INPUT SELECTOR of VSP-333.
- When VCR1, VCR2 or VDP is selected, the mode of the FUNCTION selector of this unit changes to VIDEO/AUX.

④ SUR (surround) key

For selecting surround mode.

⑤ DECK I operation keys

▶ ..... Forward playback (AUTO FUNCTION)
◀ ..... Reverse playback (AUTO FUNCTION)
◀◀ ..... Fast (reverse)
▶▶ ..... Fast (forward)
■ ..... Stop

⑥ DECK II operation keys

▶ ..... Forward playback (AUTO FUNCTION)
◀ ..... Reverse playback (AUTO FUNCTION)
▶▶ ..... Fast (forward)
◀◀ ..... Fast (reverse)
■ ..... Stop
●REC ..... Recording standby
▮▮ ..... Pause

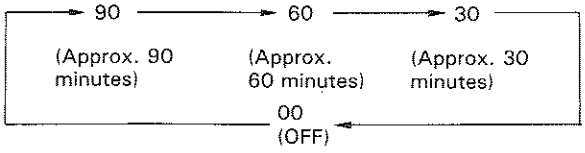
⑦ TUNER/TV keys

STATION:

- Before operation, memorize broadcast stations in the STATION CALL switches.

\+ ····· Station change in order in the upward direction
− ····· Station change in order in the downward direction

TUNING: Same as main unit TUNING switch.
BAND: Same as main unit BAND switch.
[When used with the SHIFT key]
CHANNEL:
Increases/decreases (+/−) the channel number of TV.
SLEEP:
Sets the sleep timer. Each time you press this key, the setting changes as shown here. The current setting is shown on the tuner display.
Power turns off when your set time has elapsed.



If you press the SLEEP key during SLEEP operation, the display will show the time remaining till power turns off.

⑧ CD/VDP operation keys

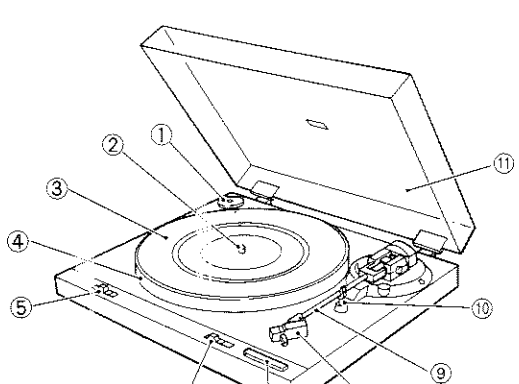
▶ ····· CD Playback (AUTO FUNCTION)
DISC ····· CD DISC selection
■ ····· CD Stop
▮▮ ····· CD Pause
|◀◀, ▶▶| ····· CD Track search
PROGRAM ····· CD Program
[When used with the SHIFT key]
▶ ····· VDP playback
DISC SIDE ····· VDP disc side selection
◀◀, ▶▶ ····· Scan: ▶▶forward, ◀◀reverse
▮▮ ····· VDP Pause
DISPLAY CALL ··· VDP Display ON/OFF

⑨ DELAY TIME

Use with the SHIFT key.
For operating surround delay time selection.

TURNTABLE FACILITIES

NOTE:
Illustration shows PL-223Z.
PL-203AZ and PL-223AZ are not equipped with dust cover.



① EP adaptor
Place over the spindle to play 45 rpm singles.

② Platter spindle

③ Platter mat

④ Platter

⑤ SPEED switch
Set this switch in accordance with the speed of the record.
33 : For 33-1/3 rpm records. 45 : For 45 rpm records.

⑥ ARM ELEVATION switch
- Use the switch for manual play.
- Use the switch to suspend record play temporarily.
- Use the switch when changing the tracks during actual play.

[UP] : The tonearm rises (the stylus moves away from the record).
[DOWN] : The tonearm descends (the stylus is lowered onto the record).

⑦ STOP switch
Press this switch for stopping play.

⑧ Cartridge

⑨ Tonearm

⑩ Arm rest

⑪ Dust cover (PL-223Z)

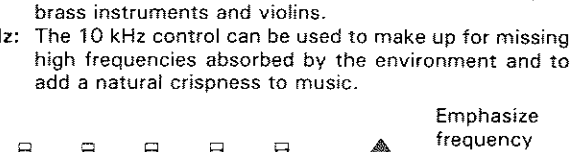
PRECAUTION

If the turntable is mounted directly on or against a speaker, the vibration from the speaker will be transported to the tonearm's cartridge, thus causing feedback howling. Be sure that speakers are mounted sufficiently separated from the turntable.

GRAPHIC EQUALIZER CONTROLS

The tone for the left (L) and right (R) audio channels can be adjusted separately with this graphic equalizer. The advantage of the GRAPHIC EQUALIZER over conventional tone controls is that the five controls of the GRAPHIC EQUALIZER make it possible to control five different narrow. With conventional tone controls a setting for a bass or treble boost or cut will also affect the lower or upper mid frequencies. The frequency bands controlled by the five slide controls have been chosen to yield the maximum possible control action within the audio spectrum.

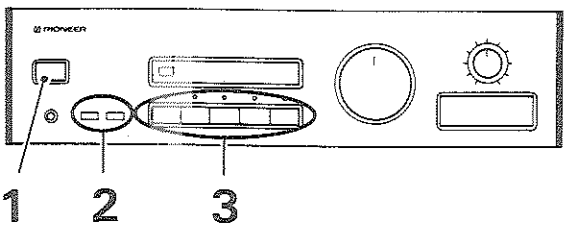
100 Hz: The 100 Hz control is very useful for enhancing low bass notes as in organ music.
330 Hz: The 330 Hz control will allow you to vary the upper bass frequencies.
1 kHz: The 1 kHz control is the presence control and can be used very effectively to emphasize, or de-emphasize vocalists.
3.3 kHz: The 3.3 kHz control will add brilliance and clarity to brass instruments and violins.
10 kHz: The 10 kHz control can be used to make up for missing high frequencies absorbed by the environment and to add a natural crispness to music.



NOTE:
The GRAPHIC EQUALIZER controls function in the modes playback and recording. The GRAPHIC EQUALIZER controls do not function when recording from Deck I to Deck II (including tape copying).

PRELIMINARY OPERATIONS

- **PERFORM THE FOLLOWING PROCEDURES BEFORE STARTING ANY OF THE OPERATIONS.**

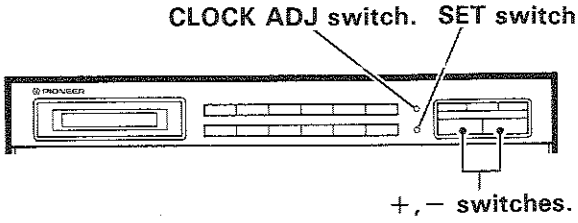


1. **Press the POWER switch to ON.**
2. **Select the SPEAKERS switch.**
3. **Select the FUNCTION switches before operating any of the equipment.**
   - To listen to a compact disc : [CD]
   - To listen to a record : [PHONO]
   - To listen to an FM or AM broadcast : [TUNER]
   - To listen to a cassette tape : [TAPE]
   - To listen to equipment connected to the VIDEO/AUX jacks: [VIDEO/AUX]

   When a FUNCTION switch is pressed, the corresponding indicator lights.

SETTING THE CLOCK

This unit has a 24-hour clock display.



1. **Press CLOCK ADJ switch.**
2. **Use "−" and "+" switches to set the hour.**
3. **Press SET switch.**
4. **Use "−" and "+" switches to set the minute.**
5. **Press SET switch when "00" seconds of that minute are reached for precise adjustment.**

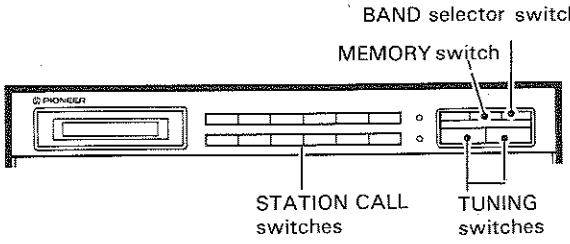
- After connecting to an AC outlet, be sure to set the present time.
- The time indication will appear as "--:--" if the AC power cord is unplugged. Be sure to set the time again after power is resumed.

BASIC OPERATIONS

RECORD PLAY (PL-203AZ/PL-223AZ/PL-223Z)

1. Perform the preliminary operations.
2. Place the record on the platter mat.
3. Remove the stylus cover and release the tonearm from the arm rest.
4. Set the SPEED switch.
5. Move the ARM ELEVATION switch to the UP position.
6. Move the tonearm by hand across the record. At this stage, the platter starts to rotate.
7. Move the ARM ELEVATION switch to the DOWN position.
8. Adjust the volume with the VOLUME control and the tone with the GRAPHIC EQUALIZER controls.
9. To stop the player, press the STOP switch.

LISTENING TO THE BROADCASTS



1. Perform the preliminary operations.
2. Select your desired broadcasting band using the BAND selector switch.
3. Press the TUNING switch to locate the frequency of your desired station.

Auto tuning:

Press the tuning switch until the frequency starts to change (about 1seconds), then release it.

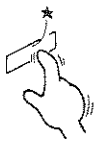
The tuner will automatically search for a broadcasting station, and stop when one is found. To search for another station, press again.

- To interrupt auto tuning, press the TUNING switch again.

NOTE:

When AUTO TUNING is in use, reception may not be possible over long distances or when signals are weak. At these times MANUAL TUNING is recommended.

Manual tuning:



Press and release quickly.

The tuning frequency will change by one step each time the switch is pressed. Press as many times as necessary to tune in the desired station.

- If the switch is held depressed for more than approximately 2 seconds, the reception frequency will change continuously, and stop when the switch is released.

NOTE:

The TUNED indicator will not function for broadcasts received over long distances or when signals are weak.

4. Adjust the volume with the VOLUME control and the tone with the GRAPHIC EQUALIZER controls.

PRESETTING STATIONS

Presetting

From 1 to 24 FM/AM stations can be preset at random. Press the STATION CALL switch once for 1 - 12 (Mode 1) and twice for 13 - 24 (Mode 2).

The setting of the FM MONO switch is aiso recorded with the preset station frequency.

1. Tune in desired station.

- See "LISTENING TO THE BROADCASTS" section for information on reception.

2. Press the MEMORY switch.

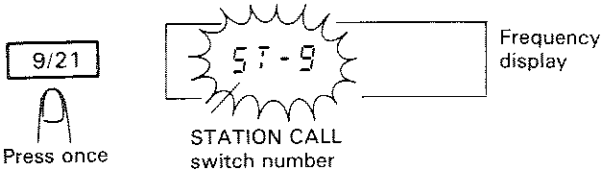
- The display will flash (about 5 seconds).

3. Press one of the STATION CALL switch.

- While the display is flashing, press the switch corresponding to the station which you wish to preset or re-preset.

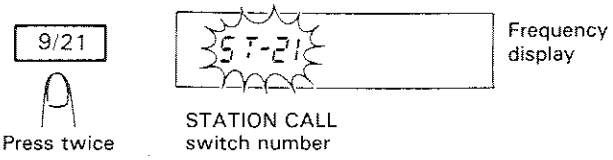
When presetting a station to Mode 1 (e.g. presetting a station to No. 9):

By pressing the STATION CALL 9/21 switch once, the station will be preset to Mode 1.



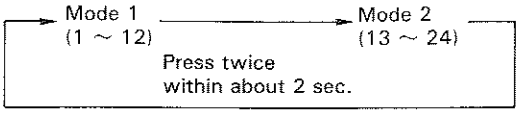
When presetting a station Mode 2 (e.g. presetting a station to No. 21) :

Mode 2 stations are preset by pressing the STATION CALL 9/21 switch twice within about 2 seconds.



- After you press the STATION CALL switch, the display will flash for about 2 seconds, then the station will be memorized. If you press another switch (except the FM MONO switch) while the display is flashing, the station will not be memorized.

Pressing the STATION CALL switch again within about 2 seconds switches alternately between Mode 1 and Mode 2.



RECEPTION USING PRESET TUNING

The setting of the FM MONO switch will also be recalled along with the preset station frequency.

1. Perform the preliminary operations on page 11.
2. Press the STATION CALL switch into which the desired station has been memorized.
   - To listen to a Mode 1 broadcast, press the switch once, and to listen to a Mode 2 broadcast, press it twice.

   In this way, simple and accurate reception of any desired station is possible.

NOTE:

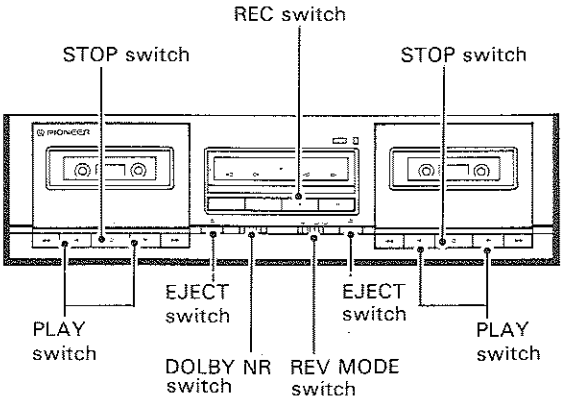
- *The contents of the STATION CALL switches will be preserved for several days, even if the power cord is unplugged.*
- *If a preset station has been erased, re-preset it.*

Last Station Memory

- The last station received on either band is memorized and can be tuned in again just by pressing tuner and Band selector switches.
- These last two stations are in memory even if POWER is turned off.

TAPE PLAY

Tapes may be played back in Deck I or Deck II but not in both decks at the same time.



1. Press EJECT switch, and load a recorded tape.
2. Set the DOLBY NR switch to the same position used for recording.
3. Select REV MODE switch.
4. Press Play switch (▶or ◀).
   Press Play switch of the loaded deck.
5. Adjust VOLUME control on the amplifier and the tone with the GRAPHIC EQUARIZER controls.
6. To stop playback, press STOP switch (■).

Auto Stop Mechanism

The mechanismstops automatically when the end of tape is reached.

NOTE:

When PLAY switch of one deck is pressed while the other deck is in playback mode, the former stops and the latter starts playback.

RECORDING ONTO A CASSETTE TAPE

Use the normal tape or chrome tape.

Material can be recorded on Deck II only. Recording is not possible on Deck I. You can make a recording of a source which has passed through the graphic equalizer.

1. Press EJECT switch, and load the tape for recording into Deck II.
   Check to see that the accidental erasure prevention tabs are not broken off.
2. Set DOLBY NR switch to the desired position.
   - A tape which has been recorded using the DOLBY NR system must be played back with the same system.
3. Select REV MODE switch.
4. Use the FUNCTION switch on the amplifier to select and play the recording source.

Program source	Selected indicator	Operation
Compact disc	CD	play a compact disc
Record	PHONO	Operate the turntable
Radio broadcast	TUNER	Tune into a broadcast
Tape	TAPE	Play a tape in Deck I
Equipment which is connected to VIDEO/AUX jacks	VIDEO/AUX	Operate the equipment connected to VIDEO/AUX jacks

5. Adjust the graphic equalizer controls to change the sound quality for recording.
6. Press REC switch (●).
   - The REC indicator lights.
   - The direction indicators flashes.
7. Press the appropriate PLAY switch (▶or ◀).
8. To stop recording, press STOP switch (■).

Auto reverse function

This unit uses rotary type recording and playback heads, and the same heads are used in both forward and reverse directions. Tape-end detection is employed to activated auto reverse operation which takes approx. 2 seconds after the tape is taken up.

NOTE:

A leader tape having a length equivalent to approx. 5 seconds is attached to an ordinary cassette tape. This means that for two-way travel of the leader tape there will be a break of approx. 12 seconds in the sound. Be very careful of this, particularly when making a two-way recording.

Pausing and restarting recording

1. Press PAUSE (▮▮) switch.
- Redording will be suspended.
2. To restart recording again, press PAUSE (▮▮) switch or PLAY switch.

Questions (Q) and answers (A) on recording

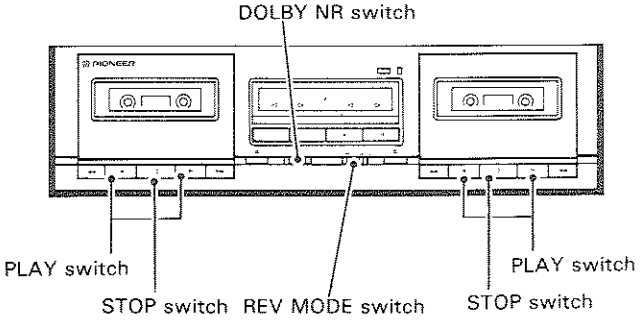
Q: How is the recording level adjusted?
A: This unit has a built-in automatic level control which dispenses with the need to adjust the recording level.
Q: What is the difference between the operation of playing a tape in one deck and recording the output onto a tape in another deck (tape dubbing), and tape copying?
A: With the TAPE FUNCTION, recording on Deck II while playing Deck I is called "tape dubbing."
"Tape copying" means using the SYNCHRO COPY switch (NORMAL or HIGH) to make a duplicate tape in Deck II of the tape in Deck I.

	Tape that was put in Deck I (playback)	DOLBY NR switch	Resulting newly recorded tape
Tape dubbing	Tape recorded with DOLBY NR	ON	Tape recorded without DOLBY NR
	Tape recorded without DOLBY NR	OFF	Tape recorded without DOLBY NR
Tape copy	Tape recorded with DOLBY NR	ON	Tape recorded with DOLBY NR
	Tape recorded without DOLBY NR	OFF	Tape recorded without DOLBY NR

Recording with the VSP-333 connected (see page 6)

- Sound recording from sources such as VCR 1, VCR 2, and VDP connected to the VSP-333 input jacks is possible with this unit's DECK II, but be sure the unit's FUNCTION switches are in a position other than TAPE. If you select TAPE with the FUNCTION switches, recording is not possible from sources connected to the VSP-333.
- If you connect the VSP-333, and select a recording source such as CD, PHONO, TUNER, or VIDEO/AUX with the unit's FUNCTION switches, be sure to set the VSP-333 INPUT SELECTOR switches to AUDIO.

CASSETTE TAPE RELAY PLAYBACK



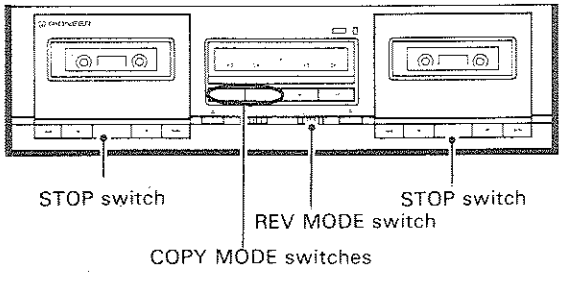
- Relay playback is repeated as follows:

→Deck I forward play (▶) →Deck I reverse play (◀)
Deck II reverse play (◀) ←Deck II forward play (▶)←

- Relay playback is possible for a maximum of 6 times.
- If there is a tape in only one of the decks, then it will be played continuously on both sides.

1. Load the playback tapes into Deck I and Deck II.
2. Set REV MODE switch to RELAY PLAY.
3. Set DOLBY NR switch to the same position used for recording.
4. Press the appropriate PLAY switch (▶or ◀) on Deck I or Deck II.
5. To stop relay playback, press STOP switch (■) of the operating deck.

COPYING TAPES



Duplicating the recorded contents of one tape onto another tape is known as tape copying. The contents of the tape in Deck I can be copied onto the tape in Deck II (but not vice versa.) Copying is not possible while either deck is operating. You cannot record a source using the graphic equalizer.

If a tape recorded with the DOLBY NR system is copied tape will also be recorded automatically with DOLBY NR system. If a tape recorded without the DOLBY NR system is copied, the copied tape will also be recorded automatically without DOLBY NR system.

1. Load the recorded tape into Deck I and the tape for recording into Deck II.
- Wind the tape forward past the leader to the start of the magnetic coating portion.
- Tape copying begins from the forward direction (▶).
- Make sure there is no tape slack.
2. Select REV MODE switch.

REV MODE switch		Operation
RELAY PLAY	REC	One side is copied from Deck I to Deck II.
REC	PLAY	Both sides are copied from Deck I to Deck II.

3. To perform a normal copy while listening to playback, set FUNCTION switch on the amplifier to TAPE and select DOLBY NR switch position.

Even if FUNCTION switch is set to another position, tape copying will still proceed. The sound of the program source selected by FUNCTION switch will be heard through the speakers.

4. Press one of COPY MODE switches.
   NORMAL: for tape copying at normal speed while listening to it.
   HIGH: for tape copying at about twice normal speed.
5. Press STOP switch (■) on either deck to stop the copying at any time.

NOTE:

- *If you are using a TV in the vicinity of the unit, noise will be recorded. Either switch off the TV or move it away from the unit.*
- *There is variation in actual tape length even among cassettes of the same length label (C-60, C-90, etc.). Therefore, even if the recording tape is labeled as the same length as the playback tape, it is possible for the recording tape to end first without recording all of the contents of the playback tape.*

MIC MIXING

(Multi-voltage model only)

MIXING KNOW-HOW

Mixing involves combining the signals from two input sources (a microphone and a tape, for example)

SINGING ALONG WITH A PROGRAM SOURCE

Operate after setting the MIC MIXING level control to SOURCE.

1. Perform the preliminary operations on page 11.
2. Plug a microphone into the MIC jack.
3. Adjust the volume to a suitable level.
4. Set the MIC MIXING level control to the center position.
   If howling occurs (a high-pitched sound from the speakers), take the following steps.
   (1) Move the mocrophone away from the speakers.
   (2) Lower the volume.
5. Select the desired program source using the FUNCTION switches.
6. Start playback of the program source.
7. Adjust the overall volume.
8. Using the MIC MIXING level control, adjust the sound balance between the microphone and the program source.
9. Using along with the program using the microphone.

NOTES:

- *Recording of mixed sound is possible. Although the sound from the speaker during playback of Deck I will be mixed sound, recording to Deck II will be made tape sound of the Deck I only.*
- *When not using the MIC MIXING function, be sure to set the MIC MIXING level control to SOURCE and remove the microphone plug from the MIC jack.*
- *The graphic equalizer does not affect the sound of microphone.*

MAINTENANCE

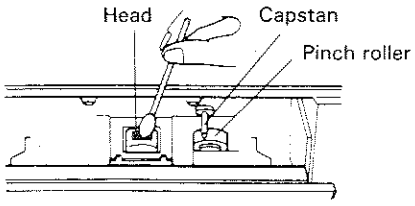
CLEANING THE HEAD SECTION

The heads, capstan and pinch roller are parts which are liable to get dirty quite easily. In particular, if the heads are dirty, the high frequency components of the sound will not be reproduced and the stereo balance will be impaired, resulting in a deterioration in sound quality. It is therefore recommended that the head section be cleaned regularly.

1. Press the EJECT switch to open the cassette door.
2. Dip a cleaning swab into the cleaning fluid and use it to wipe the heads, capstan, and pinch roller.

NOTE :

- *Clean the head as shown in the drawing.*



DEMAGNETIZING THE HEAD

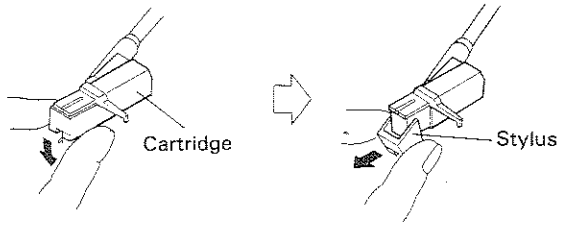
The head becomes magnetized when you use the tape deck for prolonged periods of time. This results in noise being generated and the treble dropping off during recording and playback. The head should therefore be demagnetized regularly with a head demagnetizer (sold separately). For further details, refer to the operating instructions accompanying your head demagnetizer.

NOTE:

- *Do not hold screwdrivers, metal objects, or magnets close to the heads.*
- *When demagnetizing the heads, be sure the unit's POWER switch is to the standby position.*

REPLACING THE STYLUS

1. Remove the stylus gently.



2. Attach the new stylus to the cartridge and replace the screw.

NOTE:

- *The service life of the stylus on the supplied cartridge ranges from 800 to 1,000 hours. (After about one year if you play records about two hours everyday. However, the stylus may need to be replaced earlier depending on the way it is used.)*
- *Using a worn or damaged stylus can damage your records and distort the sound reproduction. Remember to replace the stylus at the earliest possible date.*
- *Always use the PIONEER "PN-240" as a replacement stylus.*
- *Always ask for a genuine PIONEER replacement stylus.*

MAINTENANCE OF EXTERNAL SURFACES

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surfaces are very dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water, and wrung out well, and then wipe again with a dry cloth. Do not use furniture wax or cleaners.
- Never use thinners, benzine, insecticide sprays and other chemicals on or near this unit, since these will corrode the surfaces.

TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used.
If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.
This unit is controlled by an internal microprocessor. If any of the switches fail to respond, disconnect the AC power by unplugging the unit, wait for more than 5 seconds, and then plug the unit in again.

Amplifier section

Symptom	Cause	Remedy
No sound from speakers.	• Is volume level turned down? • Both the SPEAKER A ON/OFF switch and the SPEAKER B ON/OFF switch are at the ON position, but speakers are connected to only the SPEAKERS A or B terminals (not to both). • Is the selecting switch on the rear panel of VSP-333 set to correct position for the system?	• Increase volume level. • Connect speaker cords correctly. • Set the switch to correct position.

Cassette tape deck section

Symptom	Cause	Remedy
Tape deck will not work.	• Is tape loaded correctly?	• Load correctly.
No Sound from tape deck.	• Is TAPE FUNCTION switch selected? • Is a blank tape loaded? • Are heads clean?	• Press TAPE FUNCTION switch. • Load a pre-recorded tape. • Clean heads.
Recording not possible.	• Is tape loaded in Deck I ? • Are heads clean? • Is a tab on the cassette tape removed?	• Load tape in Deck II for recording. • Clean heads. • Use a cassette tape with tabs, or place a piece of adhesive tape on the back edge.
Copying not possible	• Is tab on the cassette tape removed?	• Use a cassette tape with tabs, or place a piece of adhesive tape on the back edge.
High frequency sounds not reproduced.	• Is a tape not recorded with Dolby NR system being played back with the Dolby NR system on? • Are heads clean?	• Turn off the Dolby NR system. • Clean heads.
Hight frequencies overemphasized.	• Is a Dolby NR tape being played back with the Dolby NR system off?	• Turn on the Dolby NR system.
Noise picked up during recording of tape, record, radio, etc.	• Is power to TV set turned on? • Is unit located too close to TV set? • Did you try operating the BEAT CUT switch (for AM broadcasts only)?	• Turn off TV set. • Move unit at least 30 cm from TV set. • Set the BEAT CUT switch on the rear panel to the side where noise is less.

Tuner section

Symptom	Cause	Remedy
No sound.	• Is TUNER FUNCTION switch selected?	• Press TUNER FUNCTION switch.
AM reception not possible.	• Is loop antenna connected? • Is BAND selector switch set to AM? • Is station tuned in properly?	• Connect loop antenna. • Press the BAND selector switch for AM. • Tune in station properly.
FM reception not possible.	• Is antenna connected? • Is BAND selector switch set to FM?	• Connect antenna, following instructions on page 3, 4, 5. • Press the BAND selector switch for FM.
Large amount of noise	• Are radio waves weak, causing antenna input to be insufficient?	• Connect the antenna correctly.

Turntable

Symptom	Cause	Remedy
Turntable does not work.	• Is drive belt properly attached?	• Attach belt correctly.
No sound.	• Is PHONO FUNCTION switch selected?	• Press PHONO FUNCTION switch.
Static, scratching noise produced.	• Is record surface dirty? • Is record warped or scratched?	• Clean record. • Replace record.

Remote Control Unit

Symptom	Cause	Remedy
Remote control operation is not possible.	• Battery is not installed in remote control unit. • Battery is dead. • Control cord is not connected. • A fluorescent light is shining on the remote sensor window.	• Insert battery. • Insert a new battery. • Correctly connect control cord. • Turn off the light.

SPECIFICATIONS

Amplifier Section

Continuous Average Power Output is 125 watts* per channel, min., at 8 ohms from 20 Hertz to 20,000 Hertz with no more than 0.09% total harmonic distortion.**

Input (Sensitivity/impedance)
- PHONO MM . . . . . 2.5 mV/47 kΩ
- CD, VIDEO/AUX . . . . . 150 mV/47 kΩ

Frequency Response
- PHONO MM . . . . . 20 Hz to 20,000 Hz±2 dB
- CD, VIDEO/AUX . . . . . 20 Hz to 50,000 Hz±3 dB

Signal-to-Noise Ratio (IHF, short circuited, A network)
- PHONO MM . . . . . 72 dB
- CD, VIDEO/AUX . . . . . 90 dB

Graphic Equalizer frequency band
. . . . . 100 Hz, 330 Hz, 1 kHz, 3.3 kHz, 10 kHz, ±8 dB

* *Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier.*

** *Mesured by Audio Spectrum Analizer.*

FM Tuner Section

Frequency range . . . . . 87.5 MHz to 108 MHz
Usable Sensitivity . . . . . 14.2dBf, IHF (1.4 μV/75 ohms)
50 dB Quieting Sensitivity . . . Mono: 20 dBf (2.7 μV/75 ohms)
Signal-to-Noise Ratio (IHF, 85 dBf Input) . . . . . Mono:70 dB
Stereo:67 dB
Stereo Separation . . . . . 43 dB(1 kHz)
Frequency Response . . . . . 20 Hz to 15 kHz $^{+1.0}_{-1.5}$ dB
Antenna Input . . . . . 75Ω unbalanced
300Ω balanced

AM Tuner Section

Frequency range . . . . . 530 kHz to 1,700 kHz
Sensitivity (IHF, Loop antenna) 385μV/m
Antenna . . . . . Loop Antenna

Cassette Deck Section

Systems . . . . . 4 track, 2-channel stereo
Heads . . . . . Recording/playback head × 1
Playback head × 1
Erasing head × 1
Motor . . . . . DC servo 2 speed motor × 2
Wow and Flutter . . . . . 0.09% (WRMS)
Fast Winding Time . . . . . Approximately 95 seconds (C-60 tape)

Frequency Response
−20 dB recording:
- Normal tape . . . . . 35 Hz to 14,000 Hz ± 6 dB
- CrO_2 . . . . . 35 Hz to 15,000 Hz ± 6 dB

Signal-to-Nise Ratio
- Dolby NR OFF . . . . . 50 dB

Noise Reduction Effect
- Dolby B type NR ON . . . . . More than 10 dB (at 5 kHz)

Miscellaneous

Power requirements
- U.S. and Canadian models . . . . . AC 120 V, 60Hz
- Australian models . . . . . a.c. 240 Volts ~ 50 Hz
- Multi-voltage model . . . . AC 110 V/120-127 V/220 V/240 V (switchable), 50/60 Hz

Power Consumption
- U.S. and Canadian models . . . . . 380 W, 495 VA
- Australian and Multi-voltage models . . . . . 680 W

Dimensions . . . . . 420(W) × 349.5(H) × 303(D) mm
16-9/16(W) × 13-3/4(H) × 11-15/16(D) in
Weight (without package) . . . . . 11.2 kg (24 lb 11 oz)

Furnished Parts

FM T-type Antenna 1
AM Loop Antenna 1
Operating Instructions 1
Remote control unit 1
Dry cell batteries 2
RX-730S, RX-731S, RX-1320S:
Operating instructions for the remote control unit 1

Turntable [PL-203AZ/PL-223AZ/PL-223Z]

Motor, Platter

- Motor Type . . . . . DC servo motor
- Drive Method . . . . . belt drive
- Speed . . . . . 33-1/3, 45 RPM
- Speed Variation . . . . . 0.07% WRMS(JIS)
±0.10% WTD Peak (DIN)

Signal-to-Noise Ratio . . . . . 68 dB (DIN-B)
Platter . . . . . 295 mm dia., aluminum die-cast

Tonearm

Type . . . . . Static balance straight pipe arm

Installed Cartridge

Type . . . . . MM type
Replacement stylus PN-240
Stylus . . . . . 0.6 mil diamond
Output voltage . . . . . 2.5 mV (1kHz, 5cm/s, Lat. peak)
Tracking Force . . . . . 1.5-2.5 g (optimum 2.0 g)
Frequency Response . . . . . 10 Hz to 30,000 Hz
Load Resistance . . . . . 47 kΩ
Cartridge Weight . . . . . 4 g

Other

Dimensions
- PL-203AZ/PL-223AZ . . . . . 420 (W) x 86.5 (H) x 356 (D) mm
16-9/16 (W) x 3-3/8 (H) x 14 (D) in
- PL-223Z . . . . . 420 (W) x 95 (H) x 357.5 (D) mm
16-9/16 (W) x 3-3/4 (H) x 14-1/16 (D) in

Weight
- PL-203AZ/PL-223AZ . . . . . 2.1 kg (4 lb 10 oz)
- PL-223Z . . . . . 2.7 kg (5 lb 15 oz)

Accessories

EP Adaptor 1

NOTE:
Specifications and the design subject to possible modifications without notice due to improvements.

HOW TO HANDLE CASSETTE TAPES

Bear in mind the following points before loading cassette tapes.

Is the tape loose, or is some of the tape outside the cassette?

If some of the tape is projecting outside the cassette shell or if it is loose, it may not enter between the capstan and pinch roller. This will prevent the tape from being supplied or damage the tape itself. In cases like these, insert a pencil into the reel hole and take up the slack. (Fig. A)

Some cassette tapes come with a plastic or thick paper stopper which prevents tape slack. Remove this stopper when loading the tape and replace it after having used the cassette.

What are the accidental erasure prevention tabs for?

A cassette is provided with these tabs so that important or otherwise valuable recordings will not be erased accidentally. When the tab (Fig. B) on the cassette shell is broken out with the tip of a screwdriver, it will not be possible to activate the recording function even by pressing the recording (REC) switch, so valuable recordings will not be erased in error.

To re-record on a cassette whose tabs have been broken out, simply apply a piece of adhesive tape twice over the tab areas, as shown in Fig. C.

NOTE:

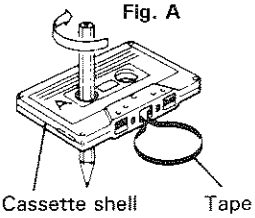
The accidental erasure prevention tabs are located at the top left on both sides A and B (1 and 2), so that material on each side can be prevented from being erased in error.

Tips on using cassette tapes

- Leader tape (which does not allow sound to be recorded over it) is provided at the beginning of a cassette tape. Start recording after allowing the tape to run for about 5 seconds so that the leader tape clears the recording head.
- Do not leave a cassette tape exposed to the environment. Store the cassette in its case so that dust and dirt do not adhere to the tape after use, and so that the tape is prevented from becoming slack. Choose a location which is not exposed to the effects of magnetism, dust, dirt and oil for storing the tapes.
- Because C-120 tapes are so thin, they easily jam in the pinch roller and capstan, and they are susceptible to other trouble such as irregular winding. Try not to use them with this unit. Use tapes of 90 minutes or less.

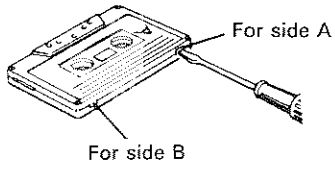
How to take up tape slack

Fig. A



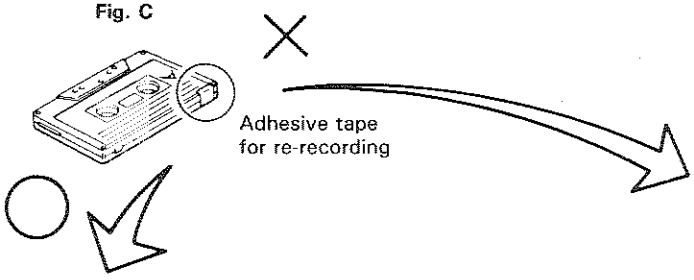
How to prevent already recorded tapes from being erased

Fig. B



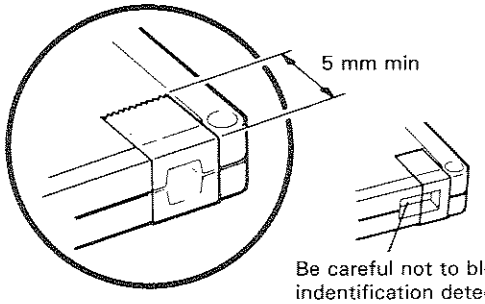
NOTE FOR RE-RECORDING ON A CASSETTE TAPE WHICH HAS A BROKEN TAB

Fig. C



CORRECT METHOD OF APPLYING TAPE

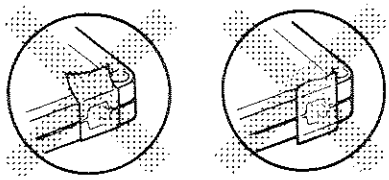
- Apply two layers of adhesive tapes.
- Apply the tape taut so that it does not rise up.



Be careful not to block the tape indentification detection hole (chrome tape.)

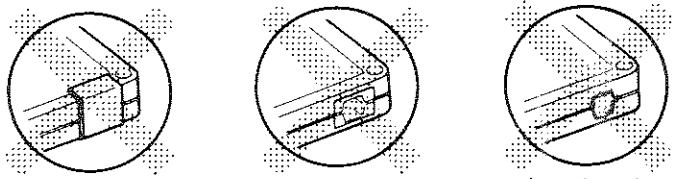
INCORRECT METHOD OF APPLYING TAPE

THIS MAY RESULT IN AN ACCIDENT



Curled tape

Protruding tape



Applied vinyl tape, gum tape, or other tape other than cello-phane tape.

Applied to top portion only.

Insertion of an eraser, or the like.

After removing the adhesive tape, completely wipe away all traces of paste. Use only alcohol or benzine.

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PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS [USA] INC. 2265 East 220th Street, Long Beach, California 90810, U.S.A.
P.O. BOX 1720, Long Beach, California 90801, U.S.A.
PIONEER ELECTRONICS OF CANADA, INC. 505 Cochrane Drive, Markham, Ontario L3R 8E3, Canada
PIONEER ELECTRONIC [EUROPE] N.V. Keetberglaan 1, 2740 Beveren, Belgium, TEL: 03/750.05.11
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia, TEL: [03] 580-9911

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